

Evaluation of  
2004 Delivered Nutrient Loads

vs.

Commonwealth of Virginia Water Quality  
Management Planning Regulation  
9 VAC 25-720

# Notes

- The following include 2004 effluent loads and wasteload allocations from the Commonwealth of Virginia Water Quality Management Planning Regulations (9 VAC 25-720) approved and subsequently suspended by the State Water Control Board on June 28, 2005.
- Blue shaded fields represent facilities which exceeded the wasteload allocations by the greatest amount. Had the facilities listed in blue complied with the wasteload allocations (zero 2004 excess in the next to last column) sufficient credits would have been available for the point sources to meet their combined basin-wide allocation. Figures do not represent violations of current VPDES permits.

## Shenandoah/Potomac River Basin

	<u>January 2005</u> <u>Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality</u> <u>Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	3,906,409	4,010,185	+3%
Total P	213,135	221,923	+4%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	5,947,799	4,939,941	-17%
Total P	409,373	346,089	-15%

## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
Potomac/Shenandoah									
VA0025143	Arlington	28.41	8.13	698,431	40.00	365,467	698,431	332,964	332,964
VA0025160	Alexandria S.A.	37.47	6.29	722,490	54.00	493,381	722,490	229,109	562,073
VA0025364	Noman Cole	41.92	6.15	782,974	67.00	612,158	782,974	170,816	732,890
DC0021199	Blue Plains (VA Share)	39.44	6.01	725,037	47.73	581,458	725,037	143,579	876,469
VA0060640	North River	11.23	9.46	326,371	16.00	85,763	143,603	57,840	934,309
VA0075191	Parkins Mill	1.63	22.50	110,718	2.10	27,045	81,931	54,886	989,195
VA0062812	Front Royal	3.30	9.56	94,013	4.00	32,648	62,989	30,340	1,019,536
VA0025151	Waynesboro	3.72	10.05	113,632	4.00	21,441	49,998	28,557	1,048,093
VA0060968	Aquia	4.39	7.43	98,927	6.50	73,093	98,927	25,834	1,073,927
VA0028363	Quantico	1.09	12.39	42,141	2.20	20,101	42,141	22,040	1,095,967
VA0020311	Strasburg	0.88	15.93	42,713	0.98	7,999	28,617	20,618	1,116,585
VA0065552	Opequon	7.80	5.24	125,297	8.40	75,729	92,720	16,991	1,133,576
VA0062642	Luray	1.42	12.85	55,955	1.60	8,576	24,620	16,044	1,149,620
VA0090263	SIL MRSS	1.25	9.95	45,962	1.92	15,671	30,794	15,123	1,164,743
VA0022853	New Market	0.64	14.00	27,098	0.50	4,081	18,155	14,074	1,178,818
VA0002178	Merck	7.53	5.48	125,170	10.09	42,321	55,075	12,754	1,191,572
VA0024724	DSC #1	3.09	5.23	49,040	4.00	36,547	49,040	12,493	1,204,064
VA0026409	Colonial Beach	0.89	11.40	30,441	2.00	18,273	30,441	12,168	1,216,232
VA0026468	Woodstock	0.67	18.70	38,286	0.80	16,324	25,651	9,328	1,225,560
VA0020532	Berryville	0.38	18.66	21,791	0.45	5,714	14,600	8,886	1,234,446
VA0022349	Weyers Cave	0.25	24.50	18,917	0.50	2,680	8,323	5,643	1,240,089
VA0024732	Massanutten	0.61	13.98	25,790	1.50	8,040	11,348	3,307	1,243,397
VA0026441	Mt. Jackson	0.21	18.70	11,724	0.60	4,897	7,855	2,958	1,246,355
VA0025291	Fishersville	1.21	14.58	53,056	2.00	21,441	23,345	1,904	1,248,258
VA0064793	Middle River	4.01	7.13	86,627	6.80	36,449	38,116	1,667	1,249,925
VA0026212	Round Hill	0.19	18.70	10,978	0.50	7,584	9,112	1,528	1,251,453
VA0028389	Stoney Creek	0.51	6.37	9,493	0.60	4,897	6,360	1,463	1,252,916
VA0020460	Vint Hill	0.07	18.70	4,044	0.60	3,180	2,346	-834	1,252,082
VA0070106	Purkins Corner STP	0.00	0.00	0	0.50	1,096	0	-1,096	1,250,986
VA0026514	Dahlgren SD	0.21	11.98	7,875	1.00	9,137	7,875	-1,262	1,249,725
MD0056464	Fairview Beach	0.00	0.00	0	0.20	1,827	0	-1,827	1,247,898
VA0002313	VA Poultry Growers - Hinton	0.59	16.88	22,005	1.50	12,060	9,682	-2,378	1,245,519
VA0021067	NSWC-Dahlgren	0.32	4.09	4,077	0.72	6,578	4,077	-2,501	1,243,019
VA0022802	Basham Simms (Purcellville)	0.50	5.03	7,582	1.00	10,111	6,293	-3,818	1,239,201
VA0090328	North Fork Regional WWTP				0.75	6,122	0	-6,122	1,233,079
VA0024678	DSC #8	3.00	3.22	29,478	4.00	36,547	29,478	-7,069	1,226,010
VA0077402	Georges Chicken	1.28	4.98	19,609	1.70	20,814	13,138	-7,675	1,218,335
VA0001961	Pilgrim's Pride - Alma					8,040	0	-8,040	1,210,295
VA0073245	Coors	0.85	13.55	35,189	4.50	24,121	15,483	-8,638	1,201,657
VA0066877	Stuarts Draft	1.14	4.47	15,440	2.40	21,441	6,794	-14,647	1,187,010
VA0002160	Invista-Waynesboro (101)	3.93	2.51	30,103	2.97	34,734	13,245	-21,489	1,165,521
VA0025101	H.L. Mooney	12.39	4.89	185,296	24.00	219,280	185,296	-33,984	1,131,536
MD0066184	Leesburg	3.58	5.94	64,881	10.00	101,112	53,851	-47,261	1,084,275
VA0024988	UOSA	27.25	14.78	1,223,602	54.00	763,096	709,689	-53,407	1,030,868
VA0091383	Broad Run	0.00	0.00	0	10.00	101,112	0	-101,112	929,756
Potomac/Shenandoah Totals						4,010,185	4,939,941	929,756	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
Potomac/Shenandoah									
VA0064793	Middle River	4.01	1.38	86,627	6.80	4,809	67,049	62,240	62,240
VA0090263	SIL MRSS	1.25	17.83	80,257	1.92	1,358	62,119	60,761	123,002
VA0075191	Parkins Mill	1.63	5.85	28,963	2.10	2,111	22,301	20,191	143,192
VA0002313	VA Poultry Growers - Hinton	0.59	15.20	27,080	1.50	1,061	20,960	19,898	163,091
VA0025151	Waynesboro	3.72	1.45	17,227	4.00	2,829	13,334	10,505	173,596
VA0025291	Fishersville	1.21	3.42	12,405	2.00	2,829	9,601	6,772	180,368
VA0073245	Coors	0.85	4.75	12,335	4.50	3,183	9,548	6,365	186,733
VA0062642	Luray	1.42	2.06	8,880	1.60	1,132	6,873	5,741	192,474
VA0002178	Merck	7.53	0.97	21,769	10.09	11,893	16,849	4,957	197,431
VA0062812	Front Royal	3.30	1.00	9,872	4.00	2,829	7,641	4,812	202,243
VA0026409	Colonial Beach	0.89	2.13	5,654	2.00	1,827	5,654	3,827	206,070
VA0024732	Massanutten	0.61	3.30	6,088	1.50	1,061	4,712	3,651	209,721
VA0022853	New Market	0.64	2.50	4,839	0.50	354	3,745	3,392	213,112
VA0020311	Strasburg	0.88	1.72	4,621	0.98	693	3,576	2,884	215,996
VA0021067	NSWC-Dahlgren	0.32	3.75	3,535	0.72	658	3,535	2,877	218,873
VA0026468	Woodstock	0.67	2.50	5,118	0.80	1,414	3,962	2,548	221,421
VA0020532	Berryville	0.38	2.50	2,918	0.45	495	2,259	1,763	223,184
MD0066184	Leesburg	3.58	1.04	11,376	10.00	7,072	8,805	1,733	224,918
VA0077402	Georges Chicken	1.28	0.91	3,541	1.70	1,202	2,741	1,539	226,456
VA0065552	Opequon	7.80	0.41	9,651	8.40	5,910	7,431	1,521	227,977
VA0022349	Weyers Cave	0.25	2.13	1,635	0.50	354	1,265	912	228,889
VA0066877	Stuarts Draft	1.14	1.37	4,816	2.40	2,829	3,727	898	229,788
VA0026441	Mt. Jackson	0.21	2.50	1,567	0.60	424	1,213	789	230,577
VA0026212	Round Hill	0.19	2.50	1,468	0.50	530	1,136	606	231,182
VA0028389	Stoney Creek	0.51	0.56	862	0.60	424	667	243	231,425
VA0060640	North River	11.23	0.43	14,520	16.00	11,315	11,238	-77	231,349
VA0070106	Purkins Corner STP	0.00	0.00	0	0.50	110	0	-110	231,239
VA0020460	Vint Hill	0.07	1.38	292	0.60	241	128	-113	231,126
MD0056464	Fairview Beach	0.00	0.00	0	0.20	183	0	-183	230,943
VA0022802	Basham Simms (Purcellville)	0.50	0.38	563	1.00	707	436	-271	230,672
VA0090328	North Fork Regional WWTP				0.75	530	0	-530	230,141
VA0026514	Dahlgren SD	0.21	0.59	369	1.00	914	369	-545	229,597
VA0002160	Invista-Waynesboro (101)	3.93	0.01	120	2.97	781	93	-688	228,908
VA0001961	Pilgrim's Pride - Alma					707	0	-707	228,201
VA0028363	Quantico	1.09	0.07	220	2.20	1,206	220	-986	227,215
VA0024678	DSC #8	3.00	0.10	897	4.00	2,193	897	-1,296	225,919
VA0024724	DSC #1	3.09	0.09	861	4.00	2,193	861	-1,332	224,587
VA0091383	Broad Run	0.00	0.00	0	10.00	2,358	0	-2,358	222,229
VA0060968	Aquia	4.39	0.14	1,897	6.50	4,386	1,897	-2,489	219,740
VA0024988	UOSA	27.25	0.07	5,646	54.00	7,236	2,484	-4,752	214,988
VA0025101	H.L. Mooney	12.39	0.12	4,384	24.00	13,157	4,384	-8,773	206,215
DC0021199	Blue Plains (VA Share)	39.44	0.12	14,370	47.73	26,166	14,370	-11,796	194,420
VA0025143	Arlington	28.41	0.05	4,291	40.00	21,928	4,291	-17,637	176,783
VA0025160	Alexandria S.A.	37.47	0.05	6,062	54.00	29,603	6,062	-23,541	153,242
VA0025364	Noman Cole	41.92	0.06	7,654	67.00	36,729	7,654	-29,075	124,166
Potomac/Shenandoah Totals						221,923	346,089	124,166	

## Rappahannock River Basin

	<u>January 2005</u> <u>Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality</u> <u>Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	463,637	496,320	+7%
Total P	39,910	43,741	+10%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	589,474	511,415	-13%
Total P	73,362	62,728	-14%



## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
Rappahannock River									
VA0003867	Omega Protein	9.04	8.19	83,974	3.80	21,213	83,974	62,761	62,761
VA0021172	Warrenton	1.64	17.12	83,373	2.50	18,578	50,857	32,279	95,041
VA0025127	Fredericksburg	2.41	8.57	63,829	3.50	42,638	63,829	21,191	116,232
VA0083411	Wilderness Shores	0.57	18.70	32,342	0.75	9,289	19,728	10,439	126,671
VA0026891	Warsaw	0.23	18.70	13,178	0.30	3,655	13,178	9,523	136,195
VA0021385	Orange	0.80	18.70	45,502	1.50	22,294	27,756	5,463	141,657
VA0031763	Marshall	0.23	18.70	13,139	0.64	4,756	8,015	3,258	144,916
VA0026263	Urbanna	0.06	24.63	4,239	0.10	1,218	4,239	3,021	147,937
VA0061590	Culpeper	2.76	6.96	58,535	4.50	33,440	35,706	2,266	150,203
VA0023469	Haynesville	0.09	12.26	3,423	0.23	2,802	3,423	621	150,824
VA0060712	Reedville	0.05	18.70	2,663	0.20	2,436	2,663	227	151,050
VA0032034	US Army-Ft. A.P. Hill	0.11	18.85	6,411	0.53	6,457	6,411	-46	151,004
VA0072729	Montross-Westmoreland	0.05	7.85	1,118	0.10	1,218	1,118	-100	150,904
VA0071471	Tappahannock	0.44	7.48	9,541	0.80	9,746	9,541	-205	150,699
VA0086789	Oakland Park STP					1,706	0	-1,706	148,993
VA0020788	Kilmarnock	0.18	4.59	2,440	0.50	6,091	2,440	-3,651	145,343
VA0090948	Rapidan STP	0.00	0.00	0	0.60	4,458	0	-4,458	140,884
VA0080527	Clevengers Corner STP	0.00	0.00	0	0.90	4,458	0	-4,458	136,426
VA0089338	Hopyard Farms STP					6,091	0	-6,091	130,335
VA0089125	Haymount	0.00	0.00	0	0.95	7,066	0	-7,066	123,269
VA0076805	Remington	0.71	3.64	8,757	2.00	14,862	5,341	-9,521	113,748
VA0090212	Mountain Run					11,147	0	-11,147	102,602
VA0068110	FMC	2.53	5.43	41,729	5.40	65,784	41,729	-24,055	78,547
VA0025658	Massaponax	4.86	4.70	69,157	8.00	97,458	69,157	-28,301	50,246
VA0076392	Little Falls Run (Stafford)	3.38	6.03	62,308	8.00	97,458	62,308	-35,150	15,095
Rappahannock River Totals						496,320	511,415	15,095	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
Rappahannock River									
VA0021172	Warrenton	1.64	1.57	7,729	2.50	2,375	8,038	5,663	5,663
VA0061590	Culpeper	2.76	1.10	9,321	4.50	4,276	9,693	5,417	11,080
VA0025127	Fredericksburg	2.41	0.96	6,820	3.50	3,198	6,820	3,622	14,702
VA0021385	Orange	0.80	2.50	6,083	1.50	2,851	6,327	3,476	18,178
VA0083411	Wilderness Shores	0.57	2.50	4,324	0.75	1,188	4,497	3,309	21,487
VA0026891	Warsaw	0.23	2.50	1,762	0.30	274	1,762	1,488	22,974
VA0003867	Omega Protein	9.04	0.28	2,965	3.80	1,591	2,965	1,374	24,349
VA0031763	Marshall	0.23	2.50	1,757	0.64	608	1,827	1,218	25,567
VA0026263	Urbanna	0.06	5.23	907	0.10	91	907	816	26,383
VA0020788	Kilmarnock	0.18	1.81	992	0.50	457	992	535	26,918
VA0071471	Tappahannock	0.44	0.90	1,197	0.80	731	1,197	466	27,385
VA0060712	Reedville	0.05	2.50	356	0.20	183	356	173	27,558
VA0023469	Haynesville	0.09	1.12	314	0.23	210	314	104	27,661
VA0072729	Montross-Westmoreland	0.05	1.29	189	0.10	91	189	98	27,759
VA0076805	Remington	0.71	0.77	1,755	2.00	1,900	1,825	-75	27,684
VA0076392	Little Falls Run (Stafford)	3.38	0.71	7,199	8.00	7,309	7,199	-110	27,574
VA0086789	Oakland Park STP					128	0	-128	27,446
VA0032034	US Army-Ft. A.P. Hill	0.11	0.23	77	0.53	484	77	-407	27,039
VA0089338	Hopyard Farms STP					457	0	-457	26,582
VA0025658	Massaponax	4.86	0.47	6,785	8.00	7,309	6,785	-524	26,058
VA0089125	Haymount	0.00	0.00	0	0.95	530	0	-530	25,528
VA0090948	Rapidan STP	0.00	0.00	0	0.60	570	0	-570	24,958
VA0080527	Clevengers Corner STP	0.00	0.00	0	0.90	570	0	-570	24,388
VA0090212	Mountain Run					1,426	0	-1,426	22,962
VA0068110	FMC	2.53	0.13	958	5.40	4,934	958	-3,976	18,986
Rappahannock River Totals						43,741	62,728	18,986	



## Eastern Shore Basin

	<u>January 2005</u> <u>Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality</u> <u>Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	31,125	34,415	+11%
Total P	1,845	2,009	+9%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	234,111	192,544	-18%
Total P	7,678	6,699	-13%

## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
Eastern Shore									
VA0004049	Tyson Food - Temperanceville	1.18	47.33	171,227	1.07	22,842	171,227	148,385	148,385
VA0027537	Shore Health Services	0.13	22.00	8,885	0.10	1,218	8,885	7,667	156,051
VA0021253	Onancock	0.25	8.17	6,265	0.25	3,046	6,265	3,219	159,270
VA0067423	Tangier Island	0.05	7.81	1,230	0.10	1,218	1,230	12	159,283
VA0021288	Cape Charles	0.17	9.38	4,938	0.50	6,091	4,938	-1,153	158,129
Eastern Shore Totals						34,415	192,544	158,129	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
Eastern Shore									
VA0027537	Shore Health Services	0.13	6.55	2,645	0.10	91	2,645	2,554	2,554
VA0021253	Onancock	0.25	1.75	1,330	0.25	228	1,330	1,102	3,656
VA0004049	Tyson Food - Temperanceville	1.18	0.58	2,110	1.07	1,142	2,110	968	4,624
VA0067423	Tangier Island	0.05	1.00	157	0.10	91	157	66	4,690
VA0021288	Cape Charles	0.17	0.86	457	0.50	457	457	0	4,690
Eastern Shore Totals						2,009	6,699	4,690	

## York River Basin

	<u>January 2005</u> <u>Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality</u> <u>Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	993,781	760,472	-23%
Total P	87,831	127,685	+45%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	1,174,445	1,328,761	+13%
Total P	162,110	159,452	-2%

## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (m)	TN Load (lbs/yr)					
York River									
VA0081311	HRSD-York	12.69	17.35	669,369	15.00	182,734	669,369	486,635	486,635
VA0003018	Giant Refinery	52.47	1.76	308,716	53.80	167,128	308,716	141,588	628,224
VA0075434	HRSD-West Point	0.57	15.60	26,744	0.60	7,309	26,744	19,435	647,658
VA0029521	Doswell	4.26	5.37	69,880	6.75	30,350	35,639	5,288	652,947
VA0073504	Caroline County Regional STP	0.25	20.00	15,119	0.50	2,558	6,350	3,792	656,739
VA0024899	Ashland	1.43	6.68	28,724	2.00	12,426	14,649	2,224	658,962
VA0028819	Mathews CH	0.05	9.60	1,430	0.10	1,218	1,430	212	659,175
VA0021105	Gordonsville	0.43	4.93	6,396	0.67	115	64	-51	659,124
VA0003115	Smurfit Stone	18.46	4.57	257,437	23.00	259,177	257,437	-1,740	657,384
VA0088331	Parham Landing	0.11	9.21	3,107	0.57	36,547	3,107	-33,440	623,945
VA0089915	Totopotomoy	0.39	3.69	5,255	5.00	60,911	5,255	-55,656	568,289
York River Totals						760,472	1,328,761	568,289	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
York River									
VA0081311	HRSD-York	12.69	1.40	53,934	15.00	13,705	53,934	40,229	40,229
VA0029521	Doswell	4.26	3.74	48,491	6.75	12,061	29,095	17,034	57,263
VA0024899	Ashland	1.43	2.22	9,610	2.00	1,096	5,766	4,670	61,933
VA0075434	HRSD-West Point	0.57	2.25	3,855	0.60	548	3,855	3,307	65,240
VA0021105	Gordonsville	0.43	1.21	1,591	0.67	515	954	439	65,679
VA0073504	Caroline County Regional STP	0.25	1.14	864	0.50	201	380	179	65,858
VA0028819	Mathews CH	0.05	1.28	200	0.10	91	200	109	65,967
VA0088331	Parham Landing	0.11	0.27	88	0.57	2,741	88	-2,653	63,314
VA0089915	Totopotomoy	0.39	0.70	850	5.00	4,568	850	-3,718	59,596
VA0003018	Giant Refinery	52.47	0.07	11,313	53.80	22,111	11,313	-10,798	48,798
VA0003115	Smurfit Stone	18.46	0.95	53,016	23.00	70,048	53,016	-17,032	31,767
York River Totals						127,685	159,452	31,767	



## James River Basin

	<u>January 2005</u> <u>Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality</u> <u>Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	11,164,092	12,582,319	+13%
Total P	1,182,502	1,234,466	+4%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	15,106,610	15,846,358	+5%
Total P	1,753,321	1,636,177	-7%

## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
James River									
VA0081272	HRSD-James River	15.17	26.58	1,220,106	20.00	487,290	1,220,106	732,816	732,816
VA0063177	Richmond (DWF only)	45.00	11.53	1,610,187	45.00	1,096,402	1,610,187	513,785	1,246,601
VA0063690	Henrico Co.	51.02	9.16	1,409,655	75.00	913,668	1,409,655	495,987	1,742,589
VA0081230	HRSD-Army Base	12.74	23.33	889,458	18.00	438,561	889,458	450,897	2,193,486
VA0081256	HRSD-Boat Harbour	15.48	22.48	1,047,242	25.00	609,112	1,047,242	438,130	2,631,616
VA0081299	HRSD-Nansemond	20.58	17.55	1,091,580	30.00	730,934	1,091,580	360,646	2,992,262
VA0005291	Honeywell-Hopewell	126.82	3.60	1,411,261		1,090,798	1,411,261	320,463	3,312,726
VA0024996	Falling Creek	9.43	13.22	374,984	10.10	123,041	374,984	251,943	3,564,669
VA0025518	RWSA-Moores Creek	9.33	15.71	446,865	15.00	111,468	272,587	161,120	3,725,788
VA0026557	Philip Morris	1.77	15.86	85,243		18,547	85,243	66,696	3,792,484
VA0003697	BWXT	0.51	174.69	272,797		114,070	166,406	52,336	3,844,821
VA0066630	Hopewell WWTP	27.84	22.28	1,878,221	50.00	1,827,336	1,878,221	50,885	3,895,706
VA0081264	HRSD-Ches/Eliz.	21.04	24.64	1,571,048	24.00	1,526,409	1,571,048	44,639	3,940,345
VA0006408	Greif Bros., Inc.	5.28	8.40	134,982		44,680	82,339	37,659	3,978,004
VA0003026	Ga. Pacific Corp	7.06	8.61	183,775		27,045	55,133	28,088	4,006,092
VA0002780	Brown & Williamson	0.89	17.48	45,395		25,583	45,395	19,812	4,025,904
VA0025437	South Central	14.29	7.00	296,992	23.00	280,192	296,992	16,800	4,042,704
VA0024945	Lake Monticello	0.65	18.70	37,151	0.50	7,394	22,662	15,268	4,057,972
VA0081302	HRSD-Williamsburg	14.47	12.67	563,061	22.50	548,201	563,061	14,860	4,072,832
VA0025542	Covington	2.13	11.32	73,084	3.00	10,964	21,925	10,961	4,083,793
VA0083135	Farmville	1.11	16.76	56,617	2.40	11,110	21,514	10,404	4,094,197
VA0020699	Powhatan Cor. Center	0.32	15.28	14,952	0.47	4,581	11,961	7,381	4,101,578
VA0020991	Buena Vista	1.61	9.55	46,469	2.25	8,223	13,941	5,718	4,107,296
VA0004031	Tysons-Glen Allen	0.93	8.59	23,879		19,552	23,879	4,327	4,111,623
VA0022772	Clifton Forge	1.65	7.60	37,922	2.00	7,309	11,376	4,067	4,115,690
VA0031321	Amherst	0.23	18.70	12,804	0.40	4,458	7,811	3,352	4,119,042
VA0027979	Low Moor	0.28	18.70	15,627	0.50	1,827	4,688	2,861	4,121,903
VA0020303	Crewe	0.38	8.53	9,759	0.50	2,315	3,708	1,394	4,123,297
VA0060194	Proctors Creek	17.63	6.14	326,885	21.50	328,920	326,885	-2,035	4,121,262
VA0004677	Lees Comm. Carpet	0.54	10.07	16,941		9,137	5,082	-4,054	4,117,208
VA0088161	Lex.-Rockbridge Reg.	0.91	8.30	22,809	2.00	10,964	6,843	-4,121	4,113,086
VA0088480	Chickahominy WWTP	0.03	10.48	119	0.25	4,934	119	-4,815	4,108,271
VA0090671	Alleg. Co. - Lower Jackson	0.00	0.00	0	1.50	5,482	0	-5,482	4,102,789
VA0004669	DuPont-Spruance	26.67	2.50	190,881		201,080	190,881	-10,199	4,092,590
VA0003646	Mead Westvaco	30.15	3.22	294,490		118,320	88,347	-29,973	4,062,617
VA0003263	J.H. Miles	0.29	181.00	105,182		158,826	105,182	-53,644	4,008,973
VA0024970	Lynchburg	12.68	6.89	264,285	22.00	326,972	161,214	-165,758	3,843,215
VA0081281	HRSD-VIP	28.41	8.73	747,439	40.00	974,579	747,439	-227,140	3,616,075
VA0004146	Dominion Chesterfield					352,036	0	-352,036	3,264,039
James River Totals						12,582,319	15,846,358	3,264,039	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
James River									
VA0003646	Mead Westvaco	30.15	3.00	272,484		175,881	299,733	123,852	123,852
VA0025518	RWSA-Moores Creek	9.33	3.53	99,266	15.00	15,076	109,193	94,117	217,969
VA0063690	Henrico Co.	51.02	0.87	128,887	75.00	68,525	128,887	60,362	278,331
VA0003026	Ga. Pacific Corp	7.06	4.22	89,249		40,202	98,174	57,972	336,303
VA0063177	Richmond (DWF only)	45.00	0.81	112,853	45.00	68,525	112,853	44,328	380,631
VA0006408	Greif Bros., Inc.	5.28	4.30	69,098		32,663	76,008	43,345	423,976
VA0060194	Proctors Creek	17.63	1.04	56,131	21.50	24,669	56,131	31,462	455,438
VA0024970	Lynchburg	12.68	1.45	55,966	22.00	36,851	61,562	24,711	480,149
VA0024996	Falling Creek	9.43	1.04	28,593	10.10	9,228	28,593	19,365	499,514
VA0066630	Hopewell WWTP	27.84	0.71	60,759	50.00	45,683	60,759	15,076	514,590
VA0020991	Buena Vista	1.61	3.16	15,306	2.25	2,262	16,837	14,575	529,165
VA0022772	Clifton Forge	1.65	2.96	14,595	2.00	2,010	16,055	14,045	543,210
VA0025437	South Central	14.29	0.61	27,220	23.00	21,014	27,220	6,206	549,417
VA0025542	Covington	2.13	1.28	8,230	3.00	3,015	9,053	6,038	555,455
VA0024945	Lake Monticello	0.65	2.50	4,967	0.50	1,000	5,463	4,463	559,918
VA0081230	HRSD-Army Base	12.74	1.53	59,213	18.00	54,820	59,213	4,393	564,311
VA0020699	Powhatan Cor. Center	0.32	4.20	4,110	0.47	472	4,521	4,049	568,360
VA0026557	Philip Morris	1.77	1.24	6,694		2,650	6,694	4,044	572,404
VA0083135	Farmville	1.11	3.10	10,471	2.40	943	4,502	3,559	575,964
VA0004669	DuPont-Spruance	26.67	0.12	9,726		7,816	9,726	1,910	577,874
VA0002780	Brown & Williamson	0.89	1.37	3,770		1,919	3,770	1,851	579,725
VA0081272	HRSD-James River	15.17	1.37	62,717	20.00	60,911	62,717	1,806	581,531
VA0027979	Low Moor	0.28	2.50	2,089	0.50	503	2,298	1,795	583,327
VA0004677	Lees Comm. Carpet	0.54	8.16	13,543		13,400	14,898	1,497	584,824
VA0031321	Amherst	0.23	2.50	1,712	0.40	603	1,883	1,280	586,104
VA0088161	Lex.-Rockbridge Reg.	0.91	2.96	3,366	2.00	3,015	3,702	687	586,792
VA0081264	HRSD-Ches/Eliz.	21.04	1.72	109,337	24.00	108,674	109,337	663	587,455
VA0004031	Tyson-Glen Allen	0.93	0.24	681		325	681	356	587,811
VA0003697	BWXT	0.51	1.06	1,647		1,675	1,811	136	587,947
VA0020303	Crewe	0.38	0.27	343	0.50	197	147	-49	587,898
VA0088480	Chickahominy WWTP	0.03	6.65	67	0.25	123	67	-56	587,842
VA0004146	Dominion Chesterfield					210	0	-210	587,632
VA0090671	Alleg. Co. - Lower Jackson	0.00	0.00	0	1.50	1,508	0	-1,508	586,124
VA0003263	J.H. Miles	0.29	18.21	10,982		18,654	10,982	-7,672	578,452
VA0081302	HRSD-Williamsburg	14.47	1.37	60,095	22.50	68,525	60,095	-8,430	570,022
VA0005291	Honeywell-Hopewell	126.82	0.09	35,154		51,592	35,154	-16,438	553,584
VA0081256	HRSD-Boat Harbour	15.48	1.15	54,184	25.00	76,139	54,184	-21,955	531,630
VA0081299	HRSD-Nansemond	20.58	0.95	58,627	30.00	91,367	58,627	-32,740	498,890
VA0081281	HRSD-VIP	28.41	0.28	24,643	40.00	121,822	24,643	-97,179	401,711
James River Totals						1,234,466	1,636,177	401,711	

## Upper/Middle James River Basin

	<u>January 2005 Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	5,797,937	6,756,371	+17%
Total P	726,118	633,344	-13%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	7,978,983	8,611,241	+8%
Total P	1,269,170	1,196,378	-6%



## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
Upper/Middle James River									
VA0063177	Richmond (DWF only)	45.00	11.53	1,610,187	45.00	1,096,402	1,610,187	513,785	513,785
VA0063690	Henrico Co.	51.02	9.16	1,409,655	75.00	913,668	1,409,655	495,987	1,009,773
VA0005291	Honeywell-Hopewell	126.82	3.60	1,411,261		1,090,798	1,411,261	320,463	1,330,236
VA0024996	Falling Creek	9.43	13.22	374,984	10.10	123,041	374,984	251,943	1,582,179
VA0025518	RWSA-Moores Creek	9.33	15.71	446,865	15.00	111,468	272,587	161,120	1,743,299
VA0026557	Philip Morris	1.77	15.86	85,243		18,547	85,243	66,696	1,809,995
VA0003697	BWXT	0.51	174.69	272,797		114,070	166,406	52,336	1,862,331
VA0066630	Hopewell WWTP	27.84	22.28	1,878,221	50.00	1,827,336	1,878,221	50,885	1,913,216
VA0006408	Greif Bros., Inc.	5.28	8.40	134,982		44,680	82,339	37,659	1,950,875
VA0003026	Ga. Pacific Corp	7.06	8.61	183,775		27,045	55,133	28,088	1,978,963
VA0002780	Brown & Williamson	0.89	17.48	45,395		25,583	45,395	19,812	1,998,775
VA0025437	South Central	14.29	7.00	296,992	23.00	280,192	296,992	16,800	2,015,575
VA0024945	Lake Monticello	0.65	18.70	37,151	0.50	7,394	22,662	15,268	2,030,843
VA0025542	Covington	2.13	11.32	73,084	3.00	10,964	21,925	10,961	2,041,804
VA0083135	Farmville	1.11	16.76	56,617	2.40	11,110	21,514	10,404	2,052,209
VA0020699	Powhatan Cor. Center	0.32	15.28	14,952	0.47	4,581	11,961	7,381	2,059,589
VA0020991	Buena Vista	1.61	9.55	46,469	2.25	8,223	13,941	5,718	2,065,307
VA0004031	Tyson-Glen Allen	0.93	8.59	23,879		19,552	23,879	4,327	2,069,634
VA0022772	Clifton Forge	1.65	7.60	37,922	2.00	7,309	11,376	4,067	2,073,702
VA0031321	Amherst	0.23	18.70	12,804	0.40	4,458	7,811	3,352	2,077,054
VA0027979	Low Moor	0.28	18.70	15,627	0.50	1,827	4,688	2,861	2,079,914
VA0020303	Crewe	0.38	8.53	9,759	0.50	2,315	3,708	1,394	2,081,308
VA0060194	Proctors Creek	17.63	6.14	326,885	21.50	328,920	326,885	-2,035	1,727,237
VA0004677	Lees Comm. Carpet	0.54	10.07	16,941		9,137	5,082	-4,054	1,723,183
VA0088161	Lex.-Rockbridge Reg.	0.91	8.30	22,809	2.00	10,964	6,843	-4,121	1,719,062
VA0088480	Chickahominy WWTP	0.03	10.48	119	0.25	4,934	119	-4,815	1,714,246
VA0090671	Alleg. Co. - Lower Jackson	0.00	0.00	0	1.50	5,482	0	-5,482	1,708,765
VA0004669	DuPont-Spruance	26.67	2.50	190,881		201,080	190,881	-10,199	1,698,565
VA0003646	Mead Westvaco	30.15	3.22	294,490		118,320	88,347	-29,973	1,668,592
VA0024970	Lynchburg	12.68	6.89	264,285	22.00	326,972	161,214	-165,758	1,502,834
VA0004146	Dominion Chesterfield					352,036	0	-352,036	1,729,272
Upper/Middle James River Totals						7,108,407	8,611,241	1,502,834	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
Upper/Middle James River									
VA0003646	Mead Westvaco	30.15	3.00	272,484		175,881	299,733	123,852	123,852
VA0025518	RWSA-Moores Creek	9.33	3.53	99,266	15.00	15,076	109,193	94,117	217,969
VA0063690	Henrico Co.	51.02	0.87	128,887	75.00	68,525	128,887	60,362	278,331
VA0003026	Ga. Pacific Corp	7.06	4.22	89,249		40,202	98,174	57,972	336,303
VA0063177	Richmond (DWF only)	45.00	0.81	112,853	45.00	68,525	112,853	44,328	380,631
VA0006408	Greif Bros., Inc.	5.28	4.30	69,098		32,663	76,008	43,345	423,976
VA0060194	Proctors Creek	17.63	1.04	56,131	21.50	24,669	56,131	31,462	455,438
VA0024970	Lynchburg	12.68	1.45	55,966	22.00	36,851	61,562	24,711	480,149
VA0024996	Falling Creek	9.43	1.04	28,593	10.10	9,228	28,593	19,365	499,514
VA0066630	Hopewell WWTP	27.84	0.71	60,759	50.00	45,683	60,759	15,076	514,590
VA0020991	Buena Vista	1.61	3.16	15,306	2.25	2,262	16,837	14,575	529,165
VA0022772	Clifton Forge	1.65	2.96	14,595	2.00	2,010	16,055	14,045	543,210
VA0025437	South Central	14.29	0.61	27,220	23.00	21,014	27,220	6,206	549,417
VA0025542	Covington	2.13	1.28	8,230	3.00	3,015	9,053	6,038	555,455
VA0024945	Lake Monticello	0.65	2.50	4,967	0.50	1,000	5,463	4,463	559,918
VA0020699	Powhatan Cor. Center	0.32	4.20	4,110	0.47	472	4,521	4,049	563,967
VA0026557	Philip Morris	1.77	1.24	6,694		2,650	6,694	4,044	568,011
VA0083135	Farmville	1.11	3.10	10,471	2.40	943	4,502	3,559	571,571
VA0004669	DuPont-Spruance	26.67	0.12	9,726		7,816	9,726	1,910	573,481
VA0002780	Brown & Williamson	0.89	1.37	3,770		1,919	3,770	1,851	575,332
VA0027979	Low Moor	0.28	2.50	2,089	0.50	503	2,298	1,795	577,128
VA0004677	Lees Comm. Carpet	0.54	8.16	13,543		13,400	14,898	1,497	578,625
VA0031321	Amherst	0.23	2.50	1,712	0.40	603	1,883	1,280	579,905
VA0088161	Lex.-Rockbridge Reg.	0.91	2.96	3,366	2.00	3,015	3,702	687	580,592
VA0004031	Tysons-Glen Allen	0.93	0.24	681		325	681	356	580,949
VA0003697	BWXT	0.51	1.06	1,647		1,675	1,811	136	581,085
VA0004146	Dominion Chesterfield						0	0	581,085
VA0020303	Crewe	0.38	0.27	343	0.50	197	147	-49	581,036
VA0088480	Chickahominy WWTP	0.03	6.65	67	0.25	123	67	-56	580,980
VA0090671	Alleg. Co. - Lower Jackson	0.00	0.00	0	1.50	1,508	0	-1,508	579,472
VA0005291	Honeywell-Hopewell					51,592	35,154	-16,438	563,034
Upper/Middle James River Totals						633,344	1,196,378	563,034	



## Lower James River Basin

	<u>January 2005 Tributary Strategy</u> Delivered Allocation (lbs/yr)	<u>Water Quality Management Plan</u> Delivered Allocation (lbs/yr)	% Change
Total N	5,366,155	5,473,912	+2%
Total P	456,384	600,912	+32%

	2003 Delivered Loads (lbs/yr)	2004 Delivered Loads (lbs/yr)	% Change
Total N	7,127,626	7,235,117	+2%
Total P	484,151	439,799	-9%

## 2004 Discharges Sorted by Excess Total N

Permit No.	Facility	2004			Design Flow (MGD)	TN Delivered Allocation	2004 Delivered TN	2004 Excess TN	2004 Cumulative Excess TN
		Avg Q (MGD)	Avg TN (mg/l)	TN Load (lbs/yr)					
Lower James River									
VA0081272	HRSD-James River	15.17	26.58	1,220,106	20.00	487,290	1,220,106	732,816	732,816
VA0081230	HRSD-Army Base	12.74	23.33	889,458	18.00	438,561	889,458	450,897	1,183,713
VA0081256	HRSD-Boat Harbour	15.48	22.48	1,047,242	25.00	609,112	1,047,242	438,130	1,621,844
VA0081299	HRSD-Nansemond	20.58	17.55	1,091,580	30.00	730,934	1,091,580	360,646	1,982,490
VA0081264	HRSD-Ches/Eliz.	21.04	24.64	1,571,048	24.00	1,526,409	1,571,048	44,639	2,027,129
VA0081302	HRSD-Williamsburg	14.47	12.67	563,061	22.50	548,201	563,061	14,860	2,041,989
VA0003263	J.H. Miles	0.29	181.00	105,182		158,826	105,182	-53,644	1,988,345
VA0081281	HRSD-VIP	28.41	8.73	747,439	40.00	974,579	747,439	-227,140	1,761,205
Lower James River Totals						5,473,912	7,235,117	1,761,205	

## 2004 Discharges Sorted by Excess Total P

Permit No.	Facility	2004			Design Flow (MGD)	TP Delivered Allocation (lbs/yr)	2004 Delivered TP	2004 Excess TP	2004 Cumulative Excess TP
		Avg Q (MGD)	Avg TP (mg/l)	TP Load (lbs/yr)					
Lower James River									
VA0081230	HRSD-Army Base	12.74	1.53	59,213	18.00	54,820	59,213	4,393	4,393
VA0081272	HRSD-James River	15.17	1.37	62,717	20.00	60,911	62,717	1,806	6,199
VA0081264	HRSD-Ches/Eliz.	21.04	1.72	109,337	24.00	108,674	109,337	663	6,862
VA0003263	J.H. Miles	0.29	18.21	10,982		18,654	10,982	-7,672	-810
VA0081302	HRSD-Williamsburg	14.47	1.37	60,095	22.50	68,525	60,095	-8,430	-9,240
VA0081256	HRSD-Boat Harbour	15.48	1.15	54,184	25.00	76,139	54,184	-21,955	-31,195
VA0081299	HRSD-Nansemond	20.58	0.95	58,627	30.00	91,367	58,627	-32,740	-63,935
VA0081281	HRSD-VIP	28.41	0.28	24,643	40.00	121,822	24,643	-97,179	-161,113
Lower James River Totals						600,912	439,799	-161,113	